Claims

1. Injection molding equipment for use with an injection molding machine having a fixed platen and a movable platen, the equipment comprising a first mold half having a cavity and carried by the fixed platen, a turret having separate faces carrying respective cores, the turret being rotatable about an axis to bring respective cores into alignment with said cavity and the turret being movable in a direction to bring respective cores into and out of registration with the cavity as the mold is closed and opened, respectively, the cavity and each core, when so registered, at least partially defining a mold volume for the reception of molten plastic, said turret and said first mold half being so configured that when one core is in registration with the cavity, another core carrying a previously molded article and not in registration with the cavity is positioned for ejection of the molded article; and an ejector for ejecting previously molded articles and having cooperating, molded article-engaging portions, at least one of said portions being movable in a first direction to close upon another ejector portion adjacent the molded article, said ejector portions, when closed, being movable in a second direction causing said article to separate from the core upon which it was molded.

2. The equipment of claim 2 wherein said first direction is at right angles to the second direction.

3. Injection molding equipment for use with an injection molding machine having a fixed platen and a platen movable in a direction toward and away from the fixed platen, the equipment comprising first and second mold halves carried respectively by the platens and closable upon each other to provide a mold cavity between them, a turret carried between the platens and having separate faces carrying respective cores that are receivable in the cavities to define mold shapes for the reception of molten plastic, the turret being rotatable about an axis to bring respective cores into alignment with said cavity, and the turret being movable along said axis to bring respective cores into and out of reception in respective cavities as the mold is closed and opened, respectively, said turret and mold halves being so configured that when one core is received in a cavity, another core carrying a previously molded article is positioned outside of the

cavities for ejection of the previously molded article, the machine including an ejector for ejecting previously molded articles, the ejector having opposed, cooperating, molded article-engaging portions, at least one of said portions being movable in a first direction to close upon an opposed article-engaging second portion, and said ejector portions, when closed, being movable in a second, different direction to cause said article to be ejected from the core upon which it was molded.

4. The equipment of claim 2 wherein said first direction is at right angles to the second direction.

5. The equipment of claim 3 wherein said first direction is parallel to the direction of movement of the movable platen.

6. The equipment of claim 3 wherein said mold halves include shields extending into contact with the cores when the mold is closed and plastic is injected therein to provide a substantially plastic-free area on the cores, and wherein said ejector portions are positioned to close upon the substantially plastic-free areas.

7. The equipment of claim 3 wherein at least one of said mold halves includes a first portion cooperating with the other mold half to define a cavity, and a second portion defining at least one recess to receive a core spaced from the cavity and carrying a previously molded article.

8. The equipment of claim 7 wherein said turret has two opposed core-bearing faces, the turret being rotatable through a 180° arc to reposition cores bearing previously molded articles from positions adjacent said first mold half portion to positions within said recess.

9. The equipment of claim 3 or claim 7 wherein said ejector is movable to eject previously molded articles concurrently with the injection of plastic into said cavities.

10. The equipment of claim 7 wherein said turret has four core-bearing faces and is rotatable through 90° arcs to reposition cores bearing previously molded articles from positions adjacent said first mold half portion to positions within said recesses.

11. Method of ejecting an injection-molded article, comprising providing opposing mold halves and a mold core, providing an ejector having portions closeable upon each other about the core, injection molding an article about the core, removing the core bearing the molded article from the mold halves, closing the ejector portions with at least one ejector portion moving in a first direction toward the core, and moving the closed ejector portions as a unit in a second direction to engage and eject the molded article from the core.

12. The method of claim 11 including providing opposing mold halves with portions positioned to engage the mold core and to provide the core with a substantially plastic-free area adjacent a molded article carried by the core, the ejector portions being closed upon the plastic free area.

13. The method of claim 12 wherein the core is borne by a face of a multi-faced rotatable turret positioned between the mold halves, the method including rotating the turret to reposition the core.

14. The method of claim 13 wherein said multi-faced turret includes cores carried by opposing turret faces such that a core carried by one face is received in a mold cavity defined by said mold halves while a core carried by the opposed face bearing a previously molded article is positioned in a recess defined by the mold halves, and wherein said one ejector portion is moved in said first and second directions to eject said molded article concurrently with the molding of another article in the mold cavity.

15. The method of claim 12 wherein cores are borne by each of four faces of a multi-faced rotatable turret positioned between the mold halves, the method including rotating the turret through sequential 90° arcs, and wherein injection of plastic into the cavities and ejection of a previously molded part occurs after each 90° rotation.